

ABSTRACT

“Morphometric Study of Aorta, Pulmonary Trunk and Ductus Arteriosus with Gross and Histological Correlations in Human Fetuses of Tamilnadu Population.”

Introduction: Materno – Fetal healthcare is one of the most rapidly evolving fields in medicine focusing on the medical and surgical management of high-risk pregnancies. Basic researches carried out in the fetus leads to an in-depth understanding of its structural and functional aspects eventually for the better care for pregnant mother and her growing fetus.

Materials and methods: To study the morphometric details of Aorta, Pulmonary Trunk and Ductus Arteriosus in the human fetuses between 14th to 36th week gestation: In-utero ultrasonographic study with histo-topographical correlations in aborted fetuses 100 samples were collected from PSG Hospitals, out of which 50 aborted fetuses and 50 ultra-sonographic images of fetuses aged between 14-36 weeks of gestation was collected.

Results & Discussion : In the present study mean aortic and pulmonary internal diameters were 2.3, 2.5 mm respectively for 14-20 weeks of gestation. From 21-30 weeks it was 3.4, 3.7 and for 31-36 weeks it is 5.7 and 6.5 mm. The association of gestational age with tunica media thickness of aorta and pulmonary trunk showed high correlation with a r value of 0.926 & 0.914. The association of gestational age with thickness of ductus arteriosus showed moderate correlation with a r value of .828. Histological basis of ductal closure by formation of the intimal mounds and interruption of internal elastic lamina (around 20th week) can further be extended to an ultra structural level.

Materno-Fetal health care as addressed through this study will be explored more by the researcher in the near future....

Keywords: Materno –Fetal Healthcare (MFH); Morphometrics; Ultrasonography (USG),